

(2) Oxygen

For reasons of space, due to the incorporation of the power-plant and the fuselage tank, only one oxygen bottle can be accommodated in the ASK 21 Mi, in the baggage compartment. The oxygen bottle fixtures are only supplied as optional extra and are not provided as standard equipment.

After fitting the oxygen bottle the pilot must make sure that it is securely seated and that the pin at the front mounting fixture is secured.

Note: Fitting of an oxygen system changes the empty mass (weight) C.G. position!

Warning: Fuel can ignite itself through pure oxygen.

(3) Emergency Location Transmitter

The least vulnerable location in case of accident is the area between the two drag spar pins at either side of the fuselage.

Therefore, the emergency location transmitter (ELT) should be fitted, in an appropriate mounting, in the compartment behind the spar tunnel (e.g. to the left fuselage wall. Control linkage elements and the access to or ventilation of electric components on the floor must in no case be impaired.

Depending on the model of the ELT further possible mounting positions are the fuselage wall above the opening to the wing leading edge baggage compartment, or - in an appropriate mounting - the cross tube at the rear instrument panel carrier.

Since the center fuselage section contains carbon fibre layers - and carbon screens the aerial radiation - the ELT aerial must be fixed in the canopy area. Yet the aerial must not be fitted direct to the canopy as it would be separated from the unit in case of a canopy jettisoning

Fig. 7.8-1 Fuel System

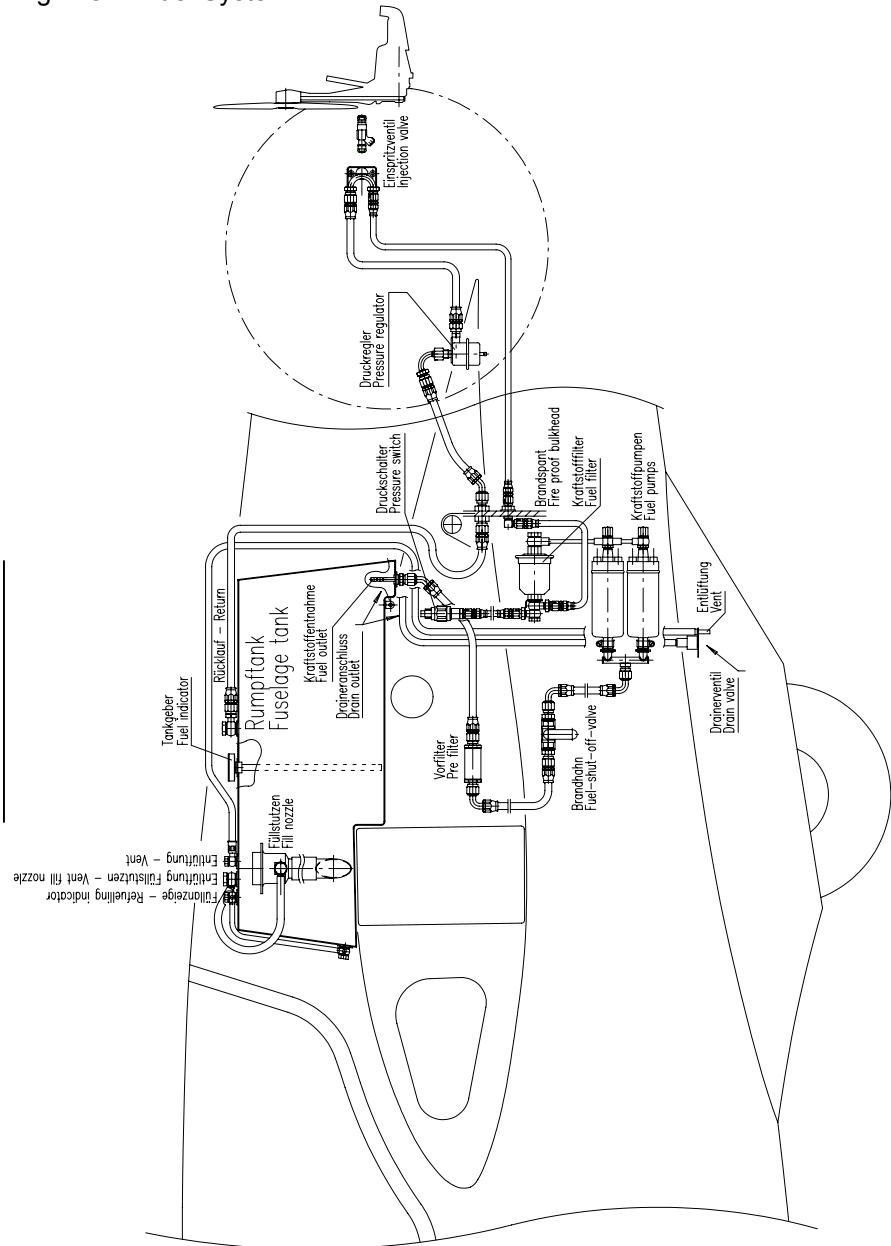
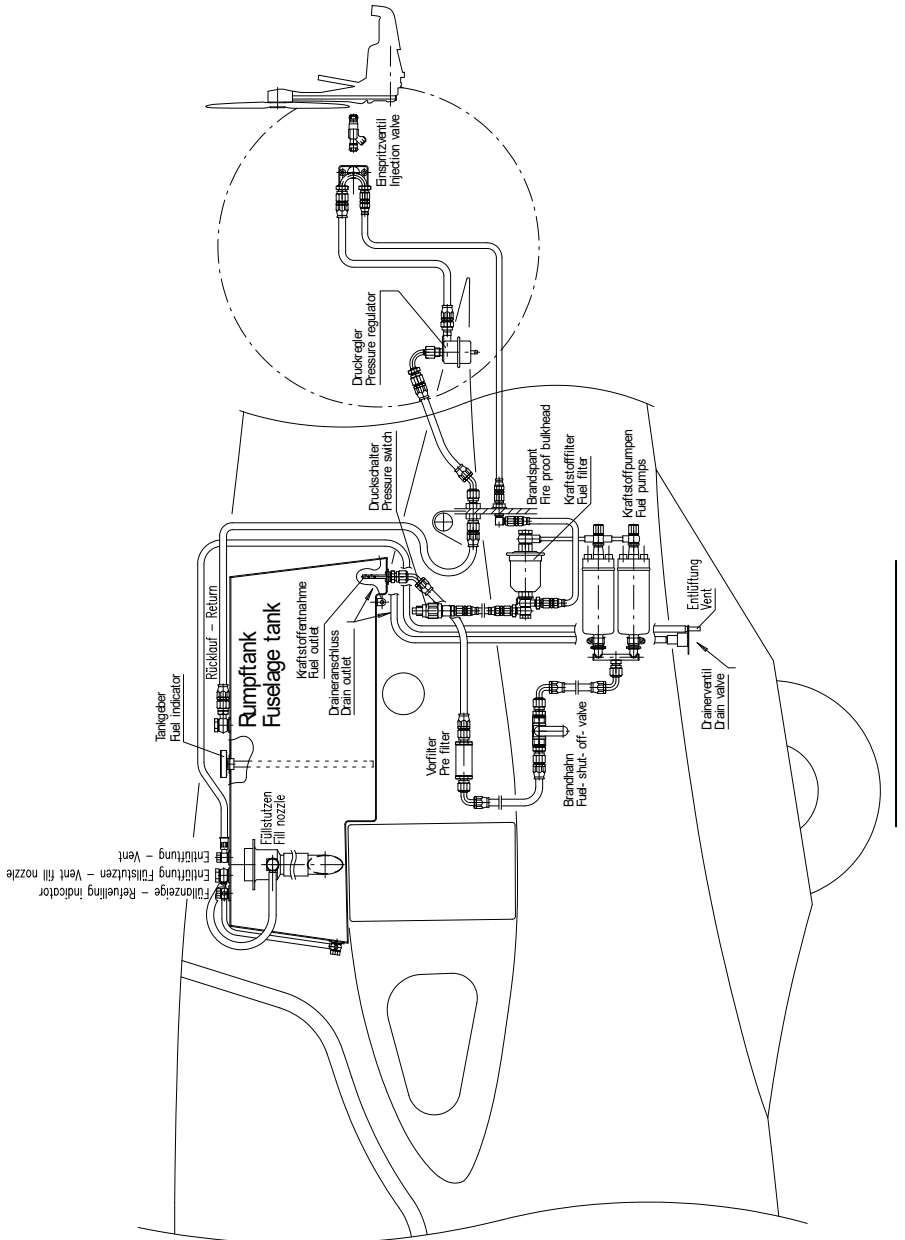


Fig. 2.12-1 Tank System, schematic



7.3 Periodic Inspections of the Power-Plant

7.3.1 Daily (prior to each flight)

See Flight Manual Section 4.3!

7.3.2 Every 25 hours

The detail numbers [x] refer to the Figs. at the end of Section 2

1. Check coolant level and where applicable fill up. See also Section 2.11.1.6 in this manual.
2. Re-tighten the six mounting bolts at the propeller flange. (And every time the propeller has been reinstalled this must be done additionally already one hour after the re-installation). Observe the torque moments!).
3. Examine the elastic tensioning cords of the engine compartment doors. Replace if damaged.
4. With the propeller retracted, the drive belt allows access to the guide pulleys [36]: check the bearing of the pulleys for play and friction by rotating them (ball bearing damaged?).
5. Remove residuals caused by oil, exhaust gases or fuel from power-plant and engine compartment wherever access is possible with the power-plant installed.
6. Remove drainer valve and clean gaskets.
7. lapsed
8. lapsed
9. Examine fuel hoses for condition, leaks and abrasions.
10. Check condition of cables and electric connectors; watch for any abrasions.
11. Check condition of control cables and engine operation control levers for stiffness and abrasions.

12. If required, adjust idling speed (see Section 2.11.1.9).
13. Check secure seating of engine mounting bolts and re-tighten if necessary (observe torque moments stated in Section 10.6!) Check locking wires securing the bolts at the front and the rear power-plant suspension mounting.
 14. Check the gas strut of the extending mechanism. If extending takes significantly more time than retracting, replace the gas strut. This must be tested with a sufficiently charged engine battery.
 15. Examine the rubber elements of the power-plant suspension mounting for cracks and other changes.
 16. Check the engine compartment door hinges for secure seating and cracks.
 17. Check propeller stop block for correct functioning; replace if necessary.
 18. Check the four lateral set screws [33] at the propeller head and retighten.
 19. Check the secure seat of the lock nuts for the three tighteners at the underside of the propeller head.
 20. Check the propeller shaft for radial play in the bearing seat (by applying radial load onto the shaft).

7.3.3 Every 50 hours

1. Inspect the engine in accordance with the Engine Manual.
2. Check drive belt for wear of cogs and wear of the belt sides.
3. Check belt pulleys for wear of teeth and condition of the hard coating of the aluminum pulleys. Minor wear is permissible.
4. Inspect the belt pulley bearings for play in the ball bearings.
5. Do an engine ground run and watch the exhaust noise emission.

7.3.4 After 150 hours

1. Inspect the engine in accordance with the Engine Manual.
2. Dismount the exhaust silencer and remove the fairing. Inspect the silencer visually for damages. Inspect the condition of the heat insulation in the fairing and replace it, if applicable.
3. Replace fuel pre-filter between fuselage tank and fuel shut-off valve (only original parts of the manufacturer Alexander Schleicher may be used! Note flow direction).
4. Replace the black fuel main filter behind the fuel pumps (spare part Mitsubishi MB 957 348).
5. Check the elastic rubber coupling between crankshaft and lower drive pulley for cracks and replace where necessary.

7.3.5 After one year

1. Inspect the engine in accordance with the Engine Manual.
2. Check coolant level and its required anti-freeze contents.
3. Remove residuals caused by oil, exhaust gases or fuel from power-plant and engine compartment wherever access is possible with the power-plant installed.
4. Check the fuel level indicator hose at the fuselage tank every year for leaks and for condition.

7.3.6 After 3 Years

1. Inspection and maintenance work on the engine in accordance with the engine manual.

7.4 Special inspection procedures of the power plant

7.4.1 After 1 hour, and 1 hour after each re-installation of the propeller

1. Check the six mounting bolts of the propeller and re-tighten (observe torque moments stated in Section 10.6!).

| Once-only Maintenance after 1 hour: Retighten M8 bolts at prop.flange | Engine Hours Period | | | | | | Years Period | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 0 - 150 | | 450 - 600 | | | | 1 - 5 | | | | |
| | 150 - 300 | | 600 - 750 | | | | 5 - 10 | | | | |
| | 300 - 450 | | 750 - 900 | | | | 10 - 15 | | | | |
| Maintenance Task at different intervals: | Hour Intervals | | | | | | Year Intervals | | | | |
| | 25 | 50 | 75 | 100 | 125 | 150 | 1 | 2 | 3 | 4 | 5 |
| Coolant level check | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Retighten propeller bolts | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check elastic tensioning cords of engine compartment doors | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check guide pulleys | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Clean power-plant (while installed) & engine compartment | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Disassemble and clean drainer valve & gaskets | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| | | | | | | | | | | | |
| Check fuel hose lines | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check electric wiring | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Inspect control cables of throttle and prop. brake | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check & adjust idling speed | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check firm seating of engine mounting bolts | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check gas strut/extending spindle | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Inspect rubber suspension buffers of engine mounting for cracks or other changes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check engine compartment door hinges for firm seat or cracks | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check propeller stop block for function. If required, replace. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check & retighten the 4 lateral set screws at the propeller head | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check secure seat of the lock nuts for the 3 tighteners | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Check propeller shaft for radial play in the bearing seatings | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| Maintenance work at the engine as per Engine Manual | | <input type="radio"/> | | <input type="radio"/> | | <input type="radio"/> | | | | | |
| Check drive belt for wear | | <input type="radio"/> | | <input type="radio"/> | | <input type="radio"/> | | | | | |
| Check belt pulleys for wear | | <input type="radio"/> | | <input type="radio"/> | | <input type="radio"/> | | | | | |
| Inspect belt pulley bearings for play in the ball bearings | | <input type="radio"/> | | <input type="radio"/> | | <input type="radio"/> | | | | | |
| Check exhaust noise emission during engine ground run | | <input type="radio"/> | | <input type="radio"/> | | <input type="radio"/> | | | | | |
| Inspect engine as per Engine Manual | | | | | | <input type="radio"/> | | | | | |
| Disassemble and check exhaust silencer and its fairing | | | | | | <input type="radio"/> | | | | | |
| Exchange fuel pre-filter | | | | | | <input type="radio"/> | | | | | |
| Exchange fuel main filter | | | | | | <input type="radio"/> | | | | | |
| Inspect rubber coupling between crank shaft and lower drive pulley for cracks | | | | | | <input type="radio"/> | | | | | |
| Inspect engine as per Engine Manual | | | | | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Check coolant level and its anti-freeze contents | | | | | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Clean power-plant (while installed) & engine compartment | | | | | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fuel level indicator hose at the fuselage tank: check for leaks and condition | | | | | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Inspect engine as per Engine Manual | | | | | | | | | <input type="radio"/> | | |

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